California State Lands Commission Marine Invasive Species Program
Vessel Fouling Technical Advisory Group Meeting Notes
April 28, 2011

Participants

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John Kelly – International Paint/American Coatings Assoc.*
Gail Ashton – Smithsonian Environmental Research Center*
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John Berge - Pacific Merchant Shipping Association*
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Naomi Parker – Ministry Agriculture and Forestry, New Zealand*
Daniel Kane – Propulsion Dynamics*
Lisa Swanson – Matson Navigation*
Jackie Mackay – CSLC*
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Meeting Notes

Chris Scianni – Reviewed CSLC mandate to develop and adopt regulations for vessel fouling by January 1, 2012. Staff is working under guidance of the Marine Invasive Species Act (MISA). Provided a recap of previous meetings: Meeting 1 (August 2010) – reintroduced Marine Invasive Species Program, discussed goals of meetings, shared new data for the purpose of setting the foundation for future meetings; Meeting 2 (October 2010) – Discussed current CSLC biofouling requirements, recent IMO events (including development of Biofouling Management Guidelines), discussed potential management options for California, and presented additional research on high risk vessels and niche areas; Meeting 3 (February 2011) – Conducted initial review of draft regulatory language. The focus of today's meeting is to continue discussion of the draft regulatory language and to discuss the next steps in the rulemaking process.

The draft regulations will be discussed section by section:
Section 1111

Chris Scianni – We have no substantive changes to this section. The reason for the specific language for 1(b) [definition of vessels subject to the regulation --- vessels capable of carrying ballast water] was to mirror language in the guiding statute (Public Resources Code 71201). Any changes to this language would require a legislative change.

No questions/comments from the group.

Section 2222
Chris Scianni - Some changes were made to the draft language to mirror changes made to the definitions in the IMO Guidelines and to respond to comments from previous TAG meetings.

No comment from the group on changes to parts (a) – (e).

Chris Scianni - Changes to the "In-Water Inspection" definition were made to acknowledge that not all inspections are conducted for purposes of biofouling assessment. However, if divers or ROVs are in the water to inspect portions of the hull, this may provide an opportunity to look at biofouling extent. This is one of those opportunities to change mindsets.

John Berge – It might provide an opportunity to look at biofouling, but it might not, depending on timing and goals.

Chris Scianni – Should we change may to might?

John Berge – No, that's fine.

Chris Scianni – We added an "In-water Treatment" definition to acknowledge that there are treatments other than those that physically remove organisms and instead sterilize or inactivate them. While these other treatments are not the same as physical removal, it means the vessel is doing something to control biofouling and therefore should be included. The second sentence was added so operators know that while this type of treatment is likely to minimize risk in the short-term, it doesn't necessarily remove the risk in the long-term.

Maurya Falkner – Even though organisms are killed they still provide structural diversity to allow increased attachment of other organisms. Therefore killing alone (without removal) wouldn't meet the performance standards based on the definitions put forward.

Naomi Parker – I can understand why it is in there, but if cleaning occurs right before arrival to CA wouldn't that be considered biofouling free? e.g. within a week of coming to CA?

Maurya Falkner – Good point. We might want to include some language allowing an alternative request on a case-by-case basis. Good example of something we might want to incorporate into appropriate language.

Naomi Parker – I just don't want to close that door. For slow moving vessels, one-off entries, treatment (killing) might be the only option you have. If it occurs immediately before entry, that should be fine. We should have that option available.

Maurya Falkner– Ok, we will work on the language.

John Berge – If a vessel did have fouling rendered inactive through sterilization, but those organisms are still considered biofouling, what level of biofouling would that be? If there was a slime layer over the inactive portion, would that be microfouling or how would the ranking work?

Maurya Falkner – There could be an alternative to the ranking on a case-by-case basis. We could grant approval to do that. Anything beyond that will have to meet the standards.

John Berge – Is this to address stochastic events after an extended residency?

Chris Scianni – Not necessarily. If a ship has heat treatment to sterilize the biofouling while leaving the hard structure in place, then is in-service for four months, we may see a build-up of organisms, depending on activity.

John Berge – I'm not sure if this is really an issue. We're just hypothesizing about what we'll be seeing.

Chris Scianni– If a vessel is in service for several months after treatment, then the fouled but sterilized hull surface may facilitate further fouling accumulation.

John Berge – This is probably moot because most ships would want to the clean hull of dead organisms to remove impediments.

Daniel Kane – At this stage we do not have a lot of experience with hull sterilization and how that relates to fuel efficiency. How will ship speed remove the dead fouling?

Maurya Falkner – Then the vessel would meet standard. The organisms are killed organisms and things slough off as the vessel moves, so we're back into normal category [i.e. no need for approval on case-by-case basis].

Chris Scianni – And many of those types of treatment systems are marketed to control microfouling before you get larger organisms.

Chris Scianni – The changes made to parts (h)(i) and (j) are to match IMO.

Steve Morin – Is paint a MGPS?

Chris – No, MGPS would be a sub-category of anti-fouling system.

Maurya Falkner – We'll need to clarify. MGPS should be a subset of anti-fouling systems.

Naomi Parker – That's how we define it in the IMO Guidelines.

John Berge – We appreciate the work to harmonize and align with IMO. Where are they at IMO with regard to coming to a final product?

Naomi Parker – At the BLG sub-committee meeting in February, we finalized the text of the Guidelines. The Guidelines will go to MEPC in July for adoption by resolution. If that goes through, and we expect it to, the Guidelines will be final and made available to everyone. At the next BLG meeting (Feb 2012), we will finalize guidance for recreational craft and process for evaluating and reviewing the guidelines to see if they are effective. If not, we may need to go down the route of a mandatory instrument in the future. But initially it is just the Guidelines.

John Berge – I'm assuming MEPC is a good benchmark. Where would that put us for a timeline to amend language in the regulations if there are any changes at MEPC?

Chris Scianni – We are supposed to have the regulations adopted by January 2012. The rulemaking process here in CA takes about 6 months.

Naomi Parker – Changes to the IMO Guidelines at this point are unlikely, but you never know.

Maurya Falkner – We can always go back and make changes to conform to IMO.

John Berge – That's fine. We have until 2013 before the regulations enter into force.

Chris Scianni – We made a change to Part (k) "niche area" for clarification and to align with IMO. Part (l) we modified the term from "dry dock support strips" to "out-of-water support strips" to acknowledge that smaller vessels may undergo out-of-water maintenance in a slipway rather than a dry dock, and for Part (n) "Shared Waters" we added El Segundo marine terminal to maintain consist terminology/definitions with current CSLC regulations. No other definitions had changes.

Steve Morin – Where the hull is scraped or damaged by anchor chains, would that be considered a niche area?

Maurya Falkner – I don't think so.

Chris Scianni – It's not one that's specifically listed in the draft regulations.

Naomi Parker – A niche area is defined to be any area more likely to be fouled, so additional measures can be put it in place. This is likely to be influenced by how a vessel operates.

Section 3333
Chris Scianni – In this section there was some clarification for consistency in subpart (a). We made changes to subpart (b) – instead of requiring the master to ensure that the vessel meets the standards, the new language would require the vessel to be maintained to the standards with documentation that it had been evaluated for biofouling extent within the prior six months to ensure that when it comes to CA, it will meet the standard. The six month period is in brackets because this is something we are looking to the group for guidance on. Is this an appropriate time period for the fleet?

Steve Morin – (b)(2) seems like a rather extreme requirement. If you have 1 or 2 barnacles you fail.

Chris Scianni – We are working under guidance of the MISA to move the state towards the elimination of discharge of invasive species, but we also have to make sure that our requirements are practical, so it's a valid point.

Maurya Falkner – Most of the fleet is well maintained. The hull surfaces look good.

Chris Scianni - Most ships that we've seen underwater or in drydock would pass. Those that wouldn't are usually instances where the coating has been damaged, and obviously things will grow there if that's the case, or it's a vessel that has been in layup. We want vessels to think about their management practices.

Maurya Falkner – The majority of the fleet is doing cleaning on a regular basis. Dives conducted so far indicate the fleet is in good shape, but it's the niche areas that are problematic.

Ian Davidson – That's consistent with what we've done and seen across studies. Most of the regular fleet, on the flat hull, would only have a slime layer. That would be [Level of Fouling (LoF)] level 0 and 1 and would pass standard.

Maurya Falkner – Then you have high risk vessels that have been sitting around and the niche areas. Majority of the fleet appears to be maintaining at [LoF] 0 – 1 levels. Stochastic vessels will have additional requirements.

Steve Morin – I feel that [LoF] level 2 would be less onerous and still potentially meet the requirements.

Maurya Falkner – We can chat more about this. What do the scientists think?

Ian Davidson – 5% of such a large surface area would be a lot of organisms. Would have to look through our data, but we haven't come across a regular vessel in CA that had that much fouling on the hull surface.

John Berge – I'm less worried about the general hull surfaces, more concerned about niche areas. Under normal liner service, can those ships maintain [LoF] level 2 or less on the niche areas?

Ian Davidson – Some ships will have to pay more attention to those areas. We've seen some ships that would exceed 15% of niche areas with biofouling. Don't know what percent of vessels that would be. Certainly for hull areas, most vessels would be in [LoF] rank 0-1. It would be a minority of vessels with niche areas above [LoF] level 2.

Maurya Falkner – We had some discussion of this at the October TAG meeting. Many vessels have MGPS to address niche areas, but those systems often aren't turned on. The systems are in place, but may not be on. We want people to pay attention to these high concern niche areas. These areas have a risk of introducing species. Need better management practices for these areas.

John Berge – I'm thinking in terms of practicality. Once there is some fouling in a niche area, it is probably more than 5%. Concerned that we'll run into a situation where a vessel is constantly in violation.

Maurya Falkner – This is new path forward. We will have to see how things go. We can modify the regulations if need be. The CA program was able to affect a cultural change by the part of industry with regards to ballast water (BW) management. We believe that will be the case with biofouling of vessels. These changes will make industry look and manage sites better. We [CSLC] will take an adaptive management approach.

Lisa Swanson – How do you envision enforcement of these provisions?

Maurya Falkner – Similar to BW management. Management plans must be maintained on the vessel. Some niche areas and hull surfaces can be seen by an inspector as they board vessel, it won't be much different than it is now. We won't be sending divers down on a regular basis. It's the honor system, we hope that when a form is signed that it is correct. If it's not, then that's criminal negligence.

Lisa Swanson – Which form is that? Annual?

Maurya Falkner – We are in the process of creating a different form, to be discussed later in this meeting.

Lynn Takata – Part of the regulation package is to maintain a log book. Part of the log book will have cleaning records, so like a BW inspection, we will review the paperwork, and logs for fouling management. When was the vessel cleaned/coated, and were

there any lay-ups? What are the high risk elements? There will be red flags that we can follow-up on.

John Berge – Part of our comments/concern, is that if the last cleaning or inspection was 3 months ago, that the master will say it was below the ranks when we last cleaned it, but I don't know what it is now, 3 months later.

Chris Scianni – If the vessel was sitting for 2 months after that inspection, then it won't be at the same level as when the inspection occurred.

John Berge – But assuming it's a regular liner vessel in active trade, it will be tough to say it is at rank 2. We won't be sure.

Naomi Parker – That's the challenge for all looking at mandatory requirements. How will we interpret information in logbooks and management plans? If a vessel undergoes normal activity, then vessel owner/master, state of CA would assume that it was still 0 or 1 for fouling after cleaning. If the vessel is not acting in a normal fashion or is stationary, then clearly we will be concerned about the level of fouling. In New Zealand, we need to interpret the info in the log book. It will take a while for us to be robust in our interpretation of information in log books. However, we have a lot of experience to draw on already.

Lisa Swanson – I understand wanting to redirect the focus to look at niche areas, but to really expect that to happen right away for all categories on a six month basis is a stretch. Sometimes we have limited time when we can be in the water. We can't inspect during cargo loading etc… We try to get in the water every six months, but requiring a thorough evaluation of all of these [niche] areas every time will be tough.

Maurya Falkner – We understand what you are saying. Originally we didn't have a time frame for cleaning/inspection, but industry wanted some better assurance of how they/we will know compliance status, so we put a date in relative to vessel operations. We needed to give you some kind of parameters. This will require a management change on industry's part. It put's responsibility on the fleet to keep track of things. Based on the data available, we don't believe these management requirements will be a huge burden to the majority of the fleet. The vast majority of fleet is already in compliance.

Lisa Swanson – Have you looked at typical hull survey reports? Is that along the lines of being thorough enough to meet your requirements?

Chris Scianni – We worked with vessel cleaning companies in Long Beach and looked at the form that they use to take down information for clients. They collect information on the percent cover and types of organisms for a hull surfaces and certain niche areas. They are already recording this type of information.

Lisa Swanson - Ok, I'm just not sure how cleaning companies vary from survey to survey. Although they zero in on specific areas, that may not include all areas on a regulatory list.

Chris Scianni – The cleaning companies we've spoken to have indicated that they will do what their clients ask of them.

Lynn Takata – The point is not necessarily that industry won't have to do anything more than what is done currently. The point is to address niche areas and change vessel fouling management for the better. It is not reasonable to expect that there will be no change to how a ship operates or manages paperwork.

Lisa Swanson – We barely have enough time to get surveys done.

Lynn Takata – Chris worked hard with coating manufacturers and MGPS representatives to minimize additional work. Regulations are based on the information from biological surveys and advice from folks like Daniel Kane and international paint representatives regarding what data is being collected. We have worked to minimize the additional requirements for industry, but you can't assume that it won't require any changes to operating practices.

John Kelly – If you find a sea chest that has growth, it will be very difficult to clean out in an operational period. The rudder etc… is not so hard. The sea chest will be hard.

Chris Scianni – But sea chests are one of the niches that do have dedicated systems [MGPS] intended to prevent fouling in that area.

John Kelly - But if there is an issue, it will be difficult to clean. Other than that, I think it's good.

Naomi Parker – If the sea chest doesn't have a MGPS, what happens with that vessel if it is not due to go back into dry dock for 3 years? How to deal with that for the regulations?

Chris Scianni – There are options for 'in-water treatments' that can sterilize organisms in the sea chest, and that can suffice until the vessel goes back into dry dock.

Maurya Falkner – What percent of vessels currently have a MGPS?

Chris Scianni – [From CSLC Hull Husbandry Reporting Form data] At least fifty percent, might be as high as 65 percent.

John Berge – Liners all have MGPS or antifouling system. More risky operators will need to keep an eye open. All liners follow good procedures.

Naomi Parker – Some of these are longer term changes. Clearly we won't see changes overnight or even over a 12 month period. We want to see new approaches being applied as soon as possible. We can understand looking at other treatment options. It's a continuous learning process. Vessel practices don't always fit well with regulation.

Maurya Falkner – Naomi, are you looking at a phase-in for the New Zealand regulations? For MGPS?

Naomi Parker – We're certainly looking at those sorts of options. We need to be able to manage the risk. If a vessel is only in NZ waters for a short time, we will give them advice about what to do before coming back. But if the vessel is coming for long period, then vessel needs to address fouling.

Maurya Falkner – That is the way this program has been run in CA. We have ways to deal with things on a case-by-case basis. We don't take enforcement action to the extreme in most cases.

Steve Morin – We don't have an issue with six month inspections for niche areas. But our standard procedure after dry dock is to wait a year for the next in-water inspection. We would request that you include that time period.

Maurya Falkner – Why? Is that standard practice at Chevron?

Steve Morin – We could change but to have our vessels out of service for an extra day, times 28 ships, that's a lot. Why inspect after six months for a brand new coating?

Maurya Falkner – We'll take that into account.

Naomi Parker – Seems logical. If it is a well-applied new coating, then a six-month inspection is not so necessary. Of course this is still dependent on a vessel operating per normal specs, not stochastic events.

Lisa Swanson – I'll discuss with our engineers. An annual inspection would help after dry dock.

Maurya Falkner – We will look at the data and put together a change in the language, and run it by everyone.

Section 4444
Chris Scianni – Most changes in this section are for clarification purposes. Now, instead of a specific diagram indicating niche areas, we're asking for the management plan to include the vessel's general arrangement and docking plan.

Maurya Falkner – This is info they [vessels] have anyways?

Chris Scianni – Yes

Steve Morin – How long after the regulations go into effect do we have to produce these plans?

Chris Scianni – This would go into effect January 2013, so one year from adoption.

Steve Morin – We just need to have it on board?

Chris Scianni – Yes, just need to have it.

John Berge – Back to IMO. Is there a requirement for a fouling management plan? Will the IMO Guidelines be in place by then [2013] as well? Is that part of package going to MEPC?

Naomi Parker – Yes, one of the key components of the Guidelines is the management plan and record book.

Steve Morin – Part (a)(4), what do you mean by the model name of paint and operating conditions?

Chris Scianni – The model name would be the name of the specific coating. For example, the manufacturer would be International Paint and the model name would be Intersleek 900. Operating conditions would be the conditions that are appropriate for the specific coating(s). Percent of time the vessel is stationary vs. not, traveling speed, that type of information.

Maurya Falkner – What the manufacturers recommend for different types of paints.

John Kelly – We review vessel speed, locations etc.. before we make recommendations for paint types.

Section 5555
Chris Scianni - We made changes to subpart (a)(1) to ask where the MGPS is installed, this goes back to the discussin we had at the prior TAG meeting. We also included in (a)(4) a request for the dates and a description of when system is not working or out of service. This is also due to the conversation at the prior TAG meeting where Ashley Coutts and Harry Coulombe mentioned many of the MGPSs they've seen were not in operation. In (a)(6) we added the requirement for vessels to include the IMO AFS certificate in the record book.

Steve Morin – Why in the record book? We have it on board anyway.

Maurya Falkner – The more you can put it together in one spot, the better. Then during an inspection, we spend less time interfering with the crew. It's all there, and we can flip through it.

Chris Scianni – This past December, the U.S. ratified the IMO AFS convention which requires the certificate to be carried on board and entry into force here in the US is imminent so vessels will be required to have these anyway.

Chris Scianni – For the rest of section 5, most of the changes are mainly for clarification. In part (g), we changed requirement to record the time when a vessel is in the same place from 30 to 10 days. Change was made to align with data we've been collecting for several years and to help in our risk assessment to prioritize boarding and inspections.

John Berge – Can you elaborate? Are most vessel in port for less than 10 days?

Maurya Falkner – We will need to pull up the graph again to look at what percent of vessels sit in place for more than 10 days.

John Kelly – It's related to the risk of fouling. If a vessel stands for 10 days or more, then fouling organisms probably came from there.

Maurya Falkner – The original fouling form asked for stays of 10 days of more.

John Berge– I understand the rationale. I'm just wondering how the populations needing to report would change.

Daniel Kane – For stochastic vessels, have you found any pattern between the age of the ship, the type of ship, or operation that has skewed results for most types of fouling? Any patterns for stochastic vessels?

Chris Scianni – Based on biological sampling or reporting form data?

Daniel Kane – Are heavily fouled vessels from certain parts of the world?

Ian Davidson – We haven't sampled many stochastic vessels. Those so far have been outliers; lots of fouling. There is no cut-off point when combining all studies of stochastic vessels from around the world, but many of those are outliers from sitting around for many months or years.

Maurya Falkner – We do have information on vessels that spent a lot of time in one place and we can see if there is a vessel type that is common. We can look at the raw numbers in forms.

Chris – In our data, the majority of the extended stationary periods belong to the "other" vessel category; vessels like cranes and dredge barges, research vessels…

Section 6666
Chris Scianni - Changes were made to this section to clarify that these actions are to be undertaken prior to arrival to ensure compliance when the vessel comes to CA, to make

sure those vessels don't have a free skate if they were cleaned 6 months ago. They need to make sure they'd be compliant when they come to CA.

No comments from the group.

Section 7777
Chris Scianni – For the reporting form, we're in the process of trying to consolidate several reporting forms to make it easier for us and industry. We are also looking into developing electronic submission capabilities. So for the time-being, we're planning on using the current Hull Husbandry Reporting Form (HHRF) as an interim measure that would still allow us to perform our per-vessel risk assessment.

Maurya Falkner – We have 3 different versions of biofouling forms that we've been playing with. Rather than hold up this process, we can continue to use the existing form. We're trying to look to consolidate the BW treatment form and the biofouling form, so that there are not as many different forms to be submitted. We've got a lot of input on questions already. Just need to decide how to format and move forward. Do we want annual and per voyage or vice versa. How to consolidate?

Chris Scianni – If we don't have a new form ready for adoption by 2013, we can continue to use the existing HHRF.

Maurya Falkner – The alternative is to slow the process down, but we can't because of the mandate. If you have other ideas, let us know.

John Berge – We desire to be the same or as close as possible to IMO. Will this give us more time accomplish that?

Maurya Falkner – Does IMO have a biofouling form?

Naomi Parker – In the Guidelines there is an example of a record book and information that should be captured in a management plan. In NZ, we will try to align the type of information collected with the information listed in the IMO guidelines. We will try to align the way reporting looks to avoid a plethora of reporting forms with various formats. It shouldn't be difficult to do.

Maurya Falkner – We are trying to be consistent with the IMO management plan and logbook. We are trying to work with NZ, Australia and Canada on the form to keep things similar. For now, Section 7777 in the regulations is a placeholder. We will continue to use the existing form until the new form is created/updated. We didn't want to slow the rulemaking process down for this big package so we'll continue to use the existing form (which is already out there in regulation).

Chris Scianni – Any other comments?

Naomi Parker – One of the things seen in NZ research is the small amount of turf algae you get at wind/water line. It is difficult to keep that area of the hull to a slime layer. Do you have any experience looking at this? We may put something specific about the wind/water line into requirements. There's evidence that it's hard to keep that area to [LoF] 0 or 1.

Ian Davidson – We encounter that a lot. We usually treat it the same as biofilm, but obviously it's not. There are lots of species, but it's all algae. It's soft fouling, could be rubbed off with a hand. There could be language that includes that in with biofilm as part of hull performance standards.

Chris Scianni – We'll talk about that.

Naomi Parker – We'll think about that for rank 1.

Chris Scianni – Our next steps are to make revisions based on this discussion. We will run a copy by you via email and then start preparing the rulemaking package to submit to California's Office of Administrative Law (OAL) in the next 4-6 weeks.

Maurya Falkner – This is not your last time to provide comments. You still have an opportunity during the rulemaking process and the Commission meeting, but we prefer to get comments up front and addressed initially. We hope to get this package to OAL next month.

John Berge – My only suggestion is to wait until the MEPC meeting in June, but I know you have a schedule.

Chris Scianni – There is always the 45-day comment period during the rulemaking process, and we can make changes if we need to and put it out for another 15-day comment period.

Naomi Parker – MEPC is 11-15 July.

Chris Scianni – We will let you know when the public comment period starts.

Adjourn